

What is claimed is:

1. A reciprocating motor comprising:

5 a multi type outer core having a plurality of single cores constructed with consecutively-stacked lamination sheets centering around a plurality of ring-shaped winding coils so as form a cylindrical structure and an insulating member placed between a plurality of the single cores;

10 an inner core inserted in the multi type outer core so as to leave a predetermined gap with an inside circumferential face of the multi type outer core; and

a moving part having a plurality of magnet rows confronting the winding coils of the multi type outer core respectively so as to reciprocate in accordance with a variation of currents flowing through the winding coils.

15 2. The reciprocating motor of claim 1, wherein lateral sides of the single cores are fixed in one body to the insulating member centering around the insulating member.

20 3. The reciprocating motor of claim 1, wherein shapes and structures of the single cores are identical to each other.

4. The reciprocating motor of claim 1, wherein the single cores of the multi type outer core are constructed with the lamination sheets of 'L' type thin plates stacked each other alternately centering around the winding coils so as to

form the cylindrical structure.

5. The reciprocating motor of claim 4, wherein each of the lamination sheets is constructed with a horizontal path part forming an outer circumferential face of the single core, a vertical path part extending from one end of the horizontal path part in a direction vertical to the horizontal path part, and a slant path part inclined from an end of the vertical path part in a length direction of the horizontal path part.
6. The reciprocating motor of claim 5, wherein the respective lamination sheets are stacked alternately so that the vertical and slant path parts confront each other so as to construct the single cores and wherein opening parts are formed between the slant path parts respectively so as to open in a direction of the magnets.
7. The reciprocating motor of claim 6, wherein a length of each of the magnets is determined by a length attained by adding a width of the opening part to a width of the slant path part forming a pole.
8. The reciprocating motor of claim 1, wherein the insulating member is formed to have a predetermined thickness enough to completely isolate the first and second single cores from each other and having a ring shape corresponding to contact faces of the first and second cores.

9. The reciprocating motor of claim 1, wherein the first and second single cores are fixed in one body to the insulating member by a connecting-fixing means centering around the insulating member.

5 10. The reciprocating motor of claim 9, wherein the connecting-fixing means comprises connecting recesses formed at both sides of the single cores and fixing protrusions protruding from both sides of the insulating member so as to fix the first and second single cores thereto by being inserted into the connecting recesses by force.

10 11. The reciprocating motor of claim 10, wherein the connecting recesses and the fixing protrusions are round ring-shaped so as to be coupled with each other.